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SHRIMP

"Contributions to the Life History of Several Penaeid Shrimps (Penaeidae) Along the South Atlantic Coast of the United States," by William W. Anderson, SSR-Fish. No. 605, May 1970, 24 pp.

Shrimp is the most valuable fishery resource of the U.S. south Atlantic coast. In 1966, shrimp contributed 40% of the $27 million exvessel value for all fishery landings in this area. Three species of shallow water penaeid shrimp are of greatest commercial importance: white shrimp, Penaeus setiferus; brown shrimp, P. azticus; and pink shrimp, P. duorarum. Information is also included on the seabob.

This report reviews the shrimp fishery for trends in yield--for the area as a unit, by states, and by species for the 10-year period 1958-67. Data are presented on size distribution, ovary development, sex ratios, and spawning seasons.

"A trend toward steady decline in total shrimp landings is indicated."

SCOMBRID FISHES

"Size, Seasonal Abundance, and Length-Weight Relation of Some Scombrid Fishes from Southeast Florida," by Grant L. Beardsley Jr., and William J. Richards, SSR-Fish. No. 595, May 1970, 6 pp.

One of the major centers for saltwat sport fishing in the U.S. is along the coast Florida from Palm Beach to Key West. T BCF Tropical Atlantic Biological Laborato (TABL), Miami, sampled 7 species of scor brid fishes received from sport fishermen f mounting by taxidermist. Sampling was determine seasonal presence of scombrids this area to compare with sampling of thei larvae in the Straits of Florida.

The species studied were: wahoo, littl tuna, skipjack tuna, king mackerel, Spanis mackerel, and blackfin tuna. Length-weigh relations, calculated weights at given lengths size distribution, and seasonal abundance ar presented in this paper for each species.

A FLORIDA BAY

"The Flora and Fauna of a Basin in Centra Florida Bay," by J. Harold Hudson, Donald M Allen, and T.J. Costello, SSR-Fish, No. 60 May 1970, 14 pp.

Florida Bay, located at the southern tip the Florida peninsula, serves as a nursi ground for pink shrimp. This paper is a stu of Porpoise Lake, a basin in the central pa of the bay. Samplings were taken of the are which is known to contain 196 species of plan and animals. A detailed description and lis ing of the species is presented, but no attem is made to relate these organisms to the en vironment, except in very general terms.

HAWAIIAN SKIPJACK TUNA

"Distribution of Fishing Effort and Catche of Skipjack Tuna, Katsuwonus pelamis, i Hawaiian Waters, by Quarters of the Year 1948-65," by Richard N. Uchida, SSR-Fish. No. 615, June 1970, 37 pp.

The report is based on "detailed data on atch, location, and effort obtained each year om all vessels that fish full time for skip- ck tuna in Hawaiian waters." It summa- zes the amount of "effective" fishing--trips hen skipjack tuna are caught--the catch, and tch per standard effective trip.

Fishing for skipjack is "highly seasonal." he effort and catch in first quarter usually ere 15% and 9% of annual totals. In May, shing intensified. Second-quarter catches, 32% of annual effort, produced 33% of annual tch. In third quarter, effort increased to % of annual total--and catches increased harply to 46% of annual take.

Abundance declined in fall, and so did fish- g. Fourth-quarter figures: 15% of annual ffort and 12% of annual catch.

ONAR

"Studies on Continuous Transmission Fre- uency Modulated Sonar," by Frank J. Hester, SR-Fish. No. 607, June 1970, 26 pp.

In 1961, the Inter-American Tropical Tuna ommission proposed a catch quota for the verfished yellowfin tuna stock. This quota ould be increased if fishing for small yel- owfin (less than 25 pounds) could be control- ed. However, it is difficult to determine the ize of fish before caught, and an attempt had ever been made.

The BCF Tuna Resources Laboratory con- ucted a study from 1963-68--designing and onstructing a shipboard sonar with fine echo requency discrimination that could locate and lassify fish schools. The equipment per- ormed as theory predicted, but difficulty with ea noise and maintaining contact with fish chools showed additional work was neces- ary for commercial application. This report iscusses these problems, some results, rec- mmendations, and target-strength measure- nents for several species of fishes.

CHUM SALMON

"Synopsis of Biological Data on the Chum Salmon, Oncorhynchus keta (Walbaum) 1792," by Richard G. Bakkala, FAO Fisheries Syn- opsis No. 41, Circular 315, March 1970, 89 pp.

Chum salmon have the widest distribution of any Pacific salmon. They inhabit widely different environments during their life, re- turning to spawn in the river from which they originated. The chum spawns in 5 countries: the U.S., Canada, Japan, Korea, and USSR; they are most abundant on the Asian continent.

Bakkala reviews nomenclature, taxonomy, morphology, distribution, ecology and life history, population dynamics, fishery, and protection and management of the chum.

NORTHERN SQUAWFISH

"Laboratory Tests of an Electrical Bar- rier for Controlling Predation by Northern Squawfish," by Galen H. Maxfield, Robert H. Lander, and Charles D. Volz, SSR-Fish. No. 611, July 1970, 8 pp.

Northern squawfish prey extensively on young sport and commercial fishes. During early spring and summer, they prey heavily on salmon (Oncorhynchus spp.). The salmon are released from upstream hatcheries on Columbia River and must run gauntlet of squawfish-infested areas on way to sea.

Controlling these predators requires find- ing a way to block their entry into release areas of hatchery-reared salmon--without interfering with salmon migration.

The authors "explored in the laboratory effectiveness of electrical fields previously found to direct the movements of salmon fingerlings."

TRAVELING SCREENS

"Preliminary Designs of Traveling Screens to Collect Juvenile Fish," SSR-Fish. No. 608, July 1970, 15 pp.

Biologists and engineers have been study- ing the problem of protecting juvenile salmon, shad, and striped bass from destruction in rivers with dangerous hydroelectric or irri- gation developments. They have studied pos- sibility of deflecting fish from their normal routes to alternate routes around dangerous areas.

Many methods of deflecting fish were examined: bands of rising bubbles, curtains of hanging chains, electrical stimuli, lights, etc. Although efficient under certain conditions, these were never completely reliable.

The traveling screens described in the report were developed to overcome these disadvantages. A traveling screen is a conveyor belt placed on edge diagonally across path of juvenile fish migrating downstream--and so are guided into bypass at downstream end of structure.

"Two horizontal traveling screens were designed and operated for 2 years at the Carson National Fish Hatchery, Carson, Wash... The screens demonstrated their potential capacity to divert young salmon moving downstream."

PACIFIC SALMON COMMISSION

"International Pacific Salmon Fisherie Commission Annual Report 1969," 53 pp.

The International Pacific Salmon Fisheri Commission held 15 formal meetings duri 1969, with approved minutes submitted to th U.S. and Canadian Governments. This repor reviews the meetings and recommendation for regulations governing the 1969 sockey and pink salmon fishery for U.S. and Canadia Convention Waters. Summaries of catch an escapement of sockeye and pink salmon ar also presented.